Abstract

In the area of distributed computing, the leader election process is meant with selecting a single node as a leader or a coordinator for a particular task that is distributed among other members. In such environments, if the leader got crashed, all other nodes have to elect another leader. In the literature, many leader election algorithms have been proposed. Most popular is the Garcia Molina’s Bully algorithm. In this paper, we propose a new leader election algorithm that is based on sending a lower number of messages to perform leader election. The results show that our proposed algorithm reduces the overhead associated with the classical Garcia’s Bully algorithm and efficiently outperform it in terms of reducing latency and message complexity.
An Efficient Overhead-aware Leader Election Algorithm for Distributed Systems


Index Terms

Computer Science Distributed Systems

Keywords

Distributed System Leader Election Leader Bully Algorithm